Headwaters Basin

(Florence, Forest, Langlade, Lincoln, Oneida, and Vilas Cos.)

Forest, Christmas, and Ornamental Tree Disease and Pest Update

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Forest tent caterpillars & Friendly flies

Overall, the infestation by the forest tent caterpillar was much less widespread this spring. Many of you must have enjoyed green leaves on aspen and oak in the spring for a change. However, some isolated heavy defoliation was still observed in parts of the Headwaters basin. This includes moderate to heavy defoliation north and northeast of Florence (north of Hwy 2), and scattered defoliation in eastern Vilas, and Forest Cos. The caterpillars started to pupate by late June, and most of them pupated by the beginning of July. Friendly flies continued to be a nuisance especially in the areas where forest tent caterpillar populations were high last year. In some areas, there were millions of friendly flies and very few caterpillars. This one-year delay in the population peak is due to the way friendly flies attack forest tent caterpillars. Friendly flies aim at the cocoon stage of the forest tent caterpillar. Maggots laid in the cocoon bore into the pupa, feed on it, and kill it, then drop to the ground to overwinter. The next spring, adult flies emerge a few weeks before the forest tent caterpillar starts to spin a cocoon. Once there are few cocoons to lay maggots on, the population of the friendly fly drops dramatically the next spring.

Gypsy moth Slow-the-Spread (STS) spray project for 2003

Gypsy moth STS pheromone flake spray applications started on June 30. In the Headwaters Basin, one large spray block (111,000 acres) that covers parts of Lincoln, Taylor and Marathon Cos. started to be sprayed on July 21. To see the maps that show all the spray areas, please visit the DATCP website at http://www.datcp.state.wi.us/arm/environment/insects/gypsy-moth/map_index.html. You can obtain up-to-date spray schedules by calling 1-800-642-MOTH.

Gypsy moth infestation in the Headwaters Basin

Moderate defoliation by the gypsy moth on oak was observed in Florence Co. Gypsy moth caterpillars were spotted in Forest, Vilas, and Langlade Cos.

Jack pine budworm population on the rise

Orange-brown discoloration of the crown of jack pine was visible in Oneida (Hwy 47 between Rhinelander and Lake Tomahawk) and Lincoln (Business 51 between Hwy 8 and Tomahawk) Cos. These trees were moderately defoliated by the jack pine budworm. Clipped needles that were used to create a protective feeding shelter became reddish as they dried, which caused the orange-brown appearance of jack pine. The late larval survey in the Northern Highland-American Legion State Forest (NHAL SF) also showed a population increase, and similar trend was detected in northwestern and central Wisconsin. Caterpillars started to pupate by June 27, and abundant moth flight was detected on July 9. Thus, feeding for this year is over.

Jack pine budworm is native to North America, and considered the most significant pest of jack pine. Larval feeding of needles can cause growth loss, top kill, and tee mortality. Stands older than 45 years that are growing on very sandy sites under suppressed conditions, such as overstocked, understocked, drought stress, are particularly vulnerable to damage.

Last outbreak of the jack pine budworm occurred in the early 1990's. It started in 1991 in northwestern Wisconsin and spread in 1992 and 1993. In 1993, the insect caused moderate to heavy defoliation on 400,000 acres of jack pine in northern and central Wisconsin, which was more than ¾ of state's jack pine. In 1994, the damaged areas were significantly decreased to 60,620 acres, and only light defoliation was detected in 1996. In the Headwaters Basin, just before the start of the last statewide outbreak, a brief one-year outbreak was observed in 1988 in the NHAL SF, where the insect heavily defoliated a 1,270-acre 44-year old jack pine stand. During the statewide outbreak, 3,000 acres were defoliated in eastern Vilas Co. in 1992. In 1994, 750 acres were heavily defoliated with another 500 acres of light defoliation in the NHAL SF near Boulder Junction. In 1995, several pockets of over-mature jack pine were heavily defoliated, and then the population collapsed in 1996 in the NHAL SF. This episode prompted a large scale salvage harvesting.

We will continue to monitor the population of this pest and give you the updates. For more information about the jack pine budworm, please visit the USDA FS website at http://www.na.fs.fed.us/spfo/pubs/howtos/ht_jack/ht_jack.htm. (Thank you, Shane Weber and Todd Lanigan, for providing me with information in your area!)

Results of the Saratoga Spittlebug nymphal survey in the NHAL SF

Annual pest detection surveys for the Saratoga spittlebug, organized by a DNR forester, Dean Farr, were conducted in June in the NHAL SF. Overall, the counts were down this year, compared to last year. One out of 22 plantations surveyed had high nymphal counts. This plantation will be closely monitored for population increase and possible damage development. No nymph was found in three out of four plantations that had shown moderate to high counts in 2002 (Dean, thank you for sharing your results with us!).

What is the white fluffy stuff on curled leaves?

Woolly alder aphids on a silver maple leaf

I have been receiving questions about curled leaves with white, wool-like, waxy substance on silver maple and elm. The question is often followed by "By the way, there is sticky stuff all over my house and the windshield of my car." These two phenomena that appear unrelated may very well be caused by the same critter – the woolly aphid. Woolly aphids are small (1/8"), pear-shaped, and are often covered with white woolly strands. They feed on plant tissue by sacking sap using needle-like mouthparts.

This summer, woolly alder aphids (*Paraprociphilus tessellatus*) were commonly found on ornamental silver maple trees in Oneida and Lincoln Cos. The woolly alder aphid requires silver maple and alder to complete its life cycle. In spring, newly-emerged aphids begin feeding on new maple leaves. In summer, winged aphids are produced and they fly to alder (both winged and wingless wooly alder aphids were found on silver maple leaves on July 15). Woolly elm aphids (*Eriosoma americana*) cause similar woolly appearance on the leaves of American elm.

Aphids excrete a sweet sticky liquid known as honeydew. The sprinkles often coat not only the leaves, but also cars, outdoor furniture or anything placed nearby infested trees. Sticky stuff can be removed easily by washing off with pressured water. For more adamant stains, try one of the methods mentioned in the University of Minnesota Extension information sheet titled "Removing sap and honeydew from cars" at http://www.extension.umn.edu/yardandgarden/ygbriefs/h454removesap.html.

Despite the bizarre look on leaves, the damage caused on trees by woolly aphids is usually minimal, and control is not necessary. For more information about woolly aphids, visit http://www.extension.umn.edu/projects/yardandgarden/ygbriefs/e453woollyaphid.html.

Branch flagging on balsam fir in Long Lake, Florence

Orange-red needles on twigs and branches were conspicuous on balsam fir in the township of Long Lake this spring. Some trees had more than 50 % of affected branches throughout the crown. Multiple wounds were found on the upper surface of twigs and branches. We suspect that the culprit is a hailstorm that the area suffered last fall. Golf-ball size hail was recorded and many homeowners around Halsey Lake needed to replace their roofs due to the storm. Although flagging of branches were much less common on nearby pine and maple, these trees also had similar wounds on the upper side of the branches.

More new Wisconsin Wildcards

Wisconsin Wildcards are eye-catching information cards, and great as educational handouts. They are approximately the size of trading cards, and each card addresses one issue (pest). New topics related to forest pests are Friendly Fly (FR-218w), Asian Longhorned Beetle (FR-218s), Emerald Ash Borer (FR-218t), Hemlock Woolly Adelgid (FR-218u), and Moving Firewood (FR-218v). DNR staff can order them through OTIC or Service Center staff. Otherwise, please contact me if you are interested in obtaining these cards.

Oak apple gall on an oak leaf

Herbicide tables are on the website

The forestry herbicide tables have been updated for 2003, and they are available through the DNR website at http://www.dnr.state.wi.us/org/land/forestry/fh/weeds/2003_herbicides.html.

1-800 number to order Borax to control Annosum root rot

Wilbur Ellis Co. has set up a 1-800 number for ordering Sporax. The number is 1-800-426-3491.

Other minor pest problems

Introduced basswood thrip – Light to moderate defoliation was found in Oneida, Forest, and Florence Cos.
Larch casebearer – Moderate defoliation was observed on tamarack in Oneida Co.
Leaf blister of maple – Black necrotic tissues on maple leaves, caused by the fungus *Taphrina* spp., were seen on maple leaves throughout the Headwaters Basin this spring.
Maple leaf roller – Light to moderate amount of rolled leaves was seen on maple throughout the Headwaters Basin.
Oak apple gall – Round galls on oak leaves were found in Lincoln and Oneida Cos.
Oak twig pruner – Damage was reported in Vilas Co.
Pecan leaf casebearer – Black cone-shaped protective cases (13-22 mm) were attached to the undersurface of the leaf stem of walnut in Oneida Co. Leaves above the case became partially to completely wilted.
Pine bark adelgid – White woolly masses were conspicuous on the stem and branches in Oneida and Lincoln Cos.
Yellowheaded spruce sawfly – Light to heavy defoliation was found on white spruce in Lincoln and Vilas Cos. Larvae were about ¾" (July 14). Open-grown, young plantations (5-9 years old) are more susceptible to this pest.

Thank you for reporting forest pest problems in your area! If you have any questions or need more information about any of the topics presented here, please contact Kyoko Scanlon at (715) 365-8934 or Kyoko.Scanlon@dnr.state.wi.us.